

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3 and 5-10** are rejected under 35 U.S.C. 102(b) as being anticipated by Nitta et al. (hereinafter “Nitta” US 2002 / 0057238).

3. As pertaining to **Claim 1**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) a blinking backlight device (36), comprising:

a storage unit (50; see Fig. 18), for storing at least one (N-1)th frame data (see Page 12, Para. [0098]); and

a blinking control module (25, 23), having an image detection unit (25), connected to a data source (DATA; also see (29-33)) and the storage unit (50), for receiving a Nth frame data (i.e., DATA) and comparing the Nth frame data and the (N-1)th frame data (i.e., previous DATA) read from the storage unit (50) according to a motion image detection algorithm to output a detection signal, so as to determine whether or not to enable a blinking backlight accordingly (see Page 3,

Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]);

wherein N is a positive integer larger than or equal to 2 (again, see Page 12, Para. [0098]).

4. As pertaining to **Claim 2**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the motion image detection algorithm detects whether an image displayed by the blinking backlight device (36) is a motion image or not (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

5. As pertaining to **Claim 3**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the when the image displayed by the blinking backlight device (36) comprises a motion image, the blinking backlight is enabled by the detection signal (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

6. As pertaining to **Claim 5**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the blinking backlight device (36) further comprises a light source brightness balance module (25), having a cycle (i.e., duty cycle) and brightness control unit (52, 53, 54), for processing a received scan signal (VSYNC, HSYNC) and a clock signal (DOTCK) to output a light source duty cycle signal and a brightness control signal

(again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

7. As pertaining to **Claim 6**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the cycle and brightness control unit (52, 53, 54) comprises a duty cycle control mechanism, for controlling a duty cycle of a fluorescence lamp (8) when the fluorescence lamp (8) is activated (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]); and

a brightness control mechanism, for controlling a brightness of the fluorescence lamp (8) according to whether the image displayed by the blinking backlight device (36) is the motion image or not (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

8. As pertaining to **Claim 7**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the light source brightness balance module (25) further comprises a signal synchronization unit (51, 53, 54) connected to the cycle and brightness control unit (52, 53, 54) for synchronizing the scan signal (VSYNC, HSYNC) and the clock signal (DOTCK; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9

through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

9. As pertaining to **Claim 8**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the fluorescence lamp (8) comprises cold cathode fluorescence lamp (CCFL; see Page 11, Para. [0089]).

10. As pertaining to **Claim 9**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the blinking control module (25) further comprises a data latch (35) connected to the image detection unit (25) and the storage unit (50) for outputting a frame data received and stored in the storage unit (50; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

11. As pertaining to **Claim 10**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the storage unit (50) comprises:

- a storage medium (50), for storing the frame data ; and
- a storage interface controller (implicit in (50) and represented by input/output arrows in Fig. 18), connected to the storage medium for storing and reading the frame data stored in the storage medium (50; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]; the storage

interface controller is implicit in the use of storage medium (50) in order to store and read the frame data).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 4 and 11-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al. (hereinafter "Nitta" US 2002 / 0057238) in view of Hirakata et al. (hereinafter "Hirakata" US 2002 / 0067332).

14. As pertaining to **Claim 4**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) is not a motion image, a blinking backlight is driven with lighting period set to be 60% or larger (see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]). Further, Nitta discloses that the conventional technique for driving an image that is not a motion image is with an "all-the-time lighting up", which constitutes a disabling of the

blinking backlight. Therefore, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that when the image displayed by the blinking backlight device (36) is not a motion image, a blinking backlight is disabled by the detection signal (i.e., driving by “all-the-time lighting up”).

An example of this technique is provided by Hirakata (see Fig. 1A-1E). Hirakata discloses a blinking backlight device comprising a blinking control module (see Fig. 6) wherein a motion image detection algorithm detects whether an image displayed by the blinking backlight device is a motion image or not (see Page 10 through Page 11, Para. [0248]-[0266]). Hirakata discloses that when the image displayed by the blinking backlight device is a motion image, a blinking backlight is enabled (see Fig. 1C-1E); and when the image displayed by the blinking backlight device is not a motion image, a blinking backlight is disabled (see Fig. 1B; also see Page 11 through Page 12, Para. [0267]-[0279]). The inventions of Nitta and Hirakata are in the same field of endeavor and both provide a means for controlling a blinking backlight to display motion images. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nitta and Hirakata.

15. As pertaining to **Claim 11**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) a method (see Fig. 1, Fig. 17, and Fig. 18) of operating a blinking backlight device (36), comprising:

determining whether an image displayed comprises a motion image or not according to two continuous frame data (see (50) in Fig. 18; also see Page 3,

Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]);

when the image displayed comprises a motion image, a blinking backlight is enabled (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

Nitta discloses that when the image displayed does not comprise a motion image, a blinking backlight is driven with lighting period set to be 60% or larger (see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]). Further, Nitta discloses that the conventional technique for driving an image that is not a motion image is with an "all-the-time lighting up", which constitutes a disabling of the blinking backlight. Therefore, it would have been obvious to one of ordinary skill in the art at the time when the invention was made that when the image displayed does not comprise a motion image, a blinking backlight is disabled (i.e., driven by "all-the-time lighting up").

An example of this technique is provided by Hirakata (see Fig. 1A-1E). Hirakata discloses a method of operating a blinking backlight device comprising the use of a blinking control module (see Fig. 6) wherein a motion image detection algorithm detects whether an image displayed by the blinking backlight device is a motion image or not (see Page 10 through Page 11, Para. [0248]-[0266]). Hirakata discloses that when the

image displayed by the blinking backlight device is a motion image, a blinking backlight is enabled (see Fig. 1C-1E); and when the image displayed by the blinking backlight device is not a motion image, a blinking backlight is disabled (see Fig. 1B; also see Page 11 through Page 12, Para. [0267]-[0279]). The inventions of Nitta and Hirakata are in the same field of endeavor and both provide a means for controlling a blinking backlight to display motion images. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Nitta and Hirakata.

16. As pertaining to **Claim 12**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the method further comprises adjusting a brightness of a light source (8; see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

17. As pertaining to **Claim 13**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that the method of determining whether to adjust the brightness of the light source (8) of not comprises determining whether an image displayed by the blinking backlight device (36) comprises the motion image or not according to a scan signal (VSYNC, HSYNC) and a clock signal (DOTCK) (again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

18. As pertaining to **Claim 14**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) comprises the motion image, a brightness control signal is outputted to increase the brightness of the light source (8; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

As pertaining to **Claim 15**, Nitta discloses (see Fig. 1, Fig. 17, and Fig. 18) that when the image displayed by the blinking backlight device (36) does not comprise the motion image, a brightness control signal is outputted to decrease the brightness of the light source (8; again, see Page 3, Para. [0020]-[0022] and [0025]-[0026]; Page 5, Para. [0034]-[0035]; Page 9 through Page 10, Para. [0077]-[0079]; and Page 11 through Page 12, Para. [0094]-[0099]).

Response to Arguments

19. Applicant's arguments filed 01 April 2008 have been fully considered but they are not persuasive. **Claims 1-15** are pending in the application of which only **Claims 1, 3, 4, and 9** have been amended. The applicant has argued that none of the references relied upon in the prior office action, namely Nitta et al. (US 2002 / 0057238) and Hirakata et al. (US 2002 / 0067332), teach or fairly suggest that the blinking control

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module outputs a detection signal, "so as to determine whether or not to enable a blinking backlight accordingly." The examiner respectfully disagrees. In fact, the examiner contends that it is precisely the goal of both Nitta and Hirakata to provide a blinking control module that outputs a detection signal "so as to determine whether or not to enable a blinking backlight accordingly (see Fig. 1, Fig. 9, Fig. 10, Fig. 17, and Fig. 18 of Nitta and see Fig. 1A-1E of Hirakata, in addition to the above rejections). The "blinking" of the backlight is clearly controlled by the duty cycle of the signal driving the light source of the backlight. Nitta and Hirakata both clearly show that the duty cycle of the light source is controlled according to whether or not an image displayed is a motion image or a still image. As shown in Fig. 10 of Nitta and in Fig. 1B of Hirakata, for example, the blinking backlight can be disabled (i.e., the backlight does not blink) when the detection signal determines that the image is not a motion image; and, as shown in Fig. 9 of Nitta and in Fig. 1C-1E of Hirakata, the blinking back can be enabled (i.e., the backlight blinks at a certain frequency) when the detection signal determines that the image is a motion image. Thus, the detection signal determines whether or not to enable the blinking backlight accordingly. Therefore, the rejection of **Claims 1-15** is maintained.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON M. MANDEVILLE whose telephone number is 571-270-3136. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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